

1 APPLICATION FOR UNITED STATES LETTERS PATENT

2 ON INVENTION FOR:

3 VESSEL FOR SEPARATING AND COLLECTING EXCESS OIL FROM DEEP
4 FRIED FOODS DISPOSED THEREIN BEFORE THE SAUTEING THEREOF

5 BY INVENTOR: Franklin Wang &
6 Rosaline K. Wang

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8 Agt. Doc. No.: WANF80A

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16 TO ALL WHOM IT MAY CONCERN:

17 BE IT KNOWN that I, Franklin Wang, a citizen of THE
18 UNITED STATES OF AMERICA and resident of: Bellerose, NY
19 11426 and Rosaline K. Wang, a citizen of THE UNITED STATES
20 OF AMERICA and resident of: Bellerose, NY 11426 have
21 invented certain new and useful improvements in a(n): VESSEL
22 FOR SEPARATING AND COLLECTING EXCESS OIL FROM DEEP FRIED
23 FOODS DISPOSED THEREIN BEFORE THE SAUTEING THEREOF of which
24 the following is a full, clear, concise and exact
25 description:
26

1 Inventors: Franklin Wang and Rosaline K. Wang
2 Invention: VESSEL FOR SEPARATING AND COLLECTING EXCESS OIL FROM DEEP
3 FRIED FOODS DISPOSED THEREIN BEFORE THE SAUTEING THEREOF
4 DOC. No.: WANF80A

5 BACKGROUND OF THE INVENTION

6 Field of the Invention:

7 The present invention relates to a vessel. More particularly, the
8 present invention relates to a vessel for separating and collecting excess
9 oil from deep fried foods disposed therein before the deep fried foods are
10 sauted.

11 Description of the Prior Art:

12 Numerous innovations for articulating food related vessels have been
13 provided in the prior art that will be described. Even though these
14 innovations may be suitable for the specific individual purposes to which
15 they address, however, they differ from the present invention.

16 A FIRST EXAMPLE, U.S. Patent No. 5,562,025 to Bull et al. teaches
17 a salad spinner comprising a bowl, a colander adapted to nest within the
18 bowl, and a lid for the bowl and colander. Drive means are associated
19 with the lid for rotating the colander relative to the bowl. The drive
20 means include a handle having one end for manual engagement with the
21 opposite end of the handle being pivotably mounted to the lid. A drive
22 gear is positioned at the opposite end of the handle, and a turret is
23 positioned on the underside of the lid. The turret is rotatably attached
24 to the lid and a pinion gear is provided in driving engagement with the
25 turret. This pinion gear meshes with the drive gear whereby movement of
26 the handle transmits movement to the turret through the pinion gear.
27 Drive tabs are carried by the turret for engaging the colander to impart
28 spinning movement to the colander in response to movement of the handle.

1 A SECOND EXAMPLE, U.S. Patent No. 5,865,109 to Bull teaches a drive
2 mechanism for relatively rotatable components such as a salad spinner
3 comprising a bowl, a colander adapted to rest within the bowl, a lid for
4 the bowl and colander, and a drive mechanism associated with the lid and
5 operatively connected to the colander for rotating the colander relative
6 to the bowl. The drive mechanism includes a handle and a drive gear
7 associated with the handle rotatably attaching the turret to the lid, a
8 pinion gear in driving engagement with the turret, and a clutch interposed
9 between the pinion gear and the turret. The pinion gear meshes with the
10 drive gear whereby movement of the handle in one direction engages the
11 clutch to transmit movement to the turret for spinning of the colander in
12 one direction. Movement of the handle in the opposite direction
13 disengages the clutch. The clutch comprises a clutch housing and a clutch
14 assembly receivable within the clutch housing. The clutch assembly
15 includes a central hub, a plurality of drive pins, flexible arms
16 connecting the drive pins to the central hub, and tensioning petals
17 attached to the central hub for engagement with the turret. Recesses
18 defined by the clutch housing receive the drive pins and these recesses
19 slope inwardly toward the central hub. An engagement surface defined by
20 the turret is received within the clutch housing and the petals operate
21 to move the pins inwardly along the recesses and into driving engagement
22 with the engagement surface when the handle is moved in one direction and
23 outwardly along the recesses and out of driving engagement when the handle
24 is moved in the opposite directions.

25 A THIRD EXAMPLE, U.S. Patent No. 5,904,090 to Lillelund et al.
26 teaches a salad spinner having a base which receives a basket for rotation
27 therein. A cover mounts to the base and includes a drive plate which
28 engages the basket to drive same. The basket includes an upper edge
29 spaced closely to the base for stability. The basket further includes one
30 or more access depressions permitting a user to insert a finger between
31 the basket and base. The drive plate includes one or more drive
32 projections which abut against the access depressions, permitting these

1 access depressions to also be used as a portion of the drive train. The
2 cover may be inverted to an inoperative position for reduced storage
3 space, and a storage cap may be secured to the base to store the salad
4 spinner, or simply the contents of the base, free from contamination.

5 A FOURTH EXAMPLE, U.S. Patent No. 6,343,546 B2 to Ancona et al.
6 teaches an electric salad spinner device which is designed for ease of use
7 and allows for efficient drying of salad greens, leafy vegetables and the
8 like. The device comprises a base component, a generally cylindrical
9 basket component, a generally cylindrical basket component, a scalable lid
10 having a handle, an on/off switch and a drive motor. Optionally, the
11 device also comprises a liquid dispenser assembly which may also be
12 motorized to provide agitation and may also comprise a sheer assembly to
13 allow for slicing in of hard vegetables such as, for example, cucumbers,
14 carrots, celery and the like.

15 A FIFTH EXAMPLE, U.S. Patent No. 6,523,457 B1 to Ancona et al.
16 teaches a pasta machine that includes a housing with a removable container
17 for holding a liquid such as water, and the housing includes a heater for
18 heating the liquid to a boiling state. An enclosed colander having a
19 cover and holding a food product such as pasta is disposed on the
20 container and includes arms to allow it to rotate through the boiling
21 water. The housing of the pasta machine includes a suitable control
22 mechanism that controls rotation of the colander through the boiling
23 water to cook the food product within the colander. The number of
24 rotations and intervals between rotation are a function of the type and
25 amount of pasta within the colander.

26 It is apparent that numerous innovations for articulating food
27 related vessels have been provided in the prior art that are adapted to
28 be used. Furthermore, even though these innovations may be suitable for
29 the specific individual purposes to which they address, however, they
30 would not be suitable for the purposes of the present invention as
31 heretofore described.

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BRIEF DESCRIPTION OF THE DRAWING

2 The figures of the drawing are briefly described as follows:

3 FIGURE 1 is a partially exploded diagrammatic perspective view of the
4 present invention;

5 FIGURE 2 is a diagrammatic cross sectional view taken along LINE 2-2
6 in FIGURE 1;

7 FIGURE 3 is an enlarged diagrammatic elevational view of the area
8 generally enclosed by the dotted curve identified by ARROW 3
9 in FIGURE 1; and

10 FIGURE 4 is an enlarged diagrammatic cross sectional view taken along
11 LINE 4-4 in FIGURE 3.

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LIST OF REFERENCE NUMERALS UTILIZED IN THE DRAWING

2 10 vessel of present invention for separating and collecting excess
3 oil 12 from deep fried foods 14 disposed therein before deep
4 fried foods 14 are sauted
5 12 excess oil
6 14 deep fried foods
7 16 pot for collecting excess oil 12 from deep fried foods 14
8 18 colander for holding fried foods 14
9 20 motor for centrifugally forcing excess oil 12 from deep fried
10 foods 14 out therefrom and collecting in pot 16
11 22 gear train
12 24 handle
13 26 apparatus
14 28 bottom of pot 16
15 30 bearing of pot 16
16 32 bottom of colander 18
17 33 axis of rotation of colander 18
18 34 driven gear of gear train 22
19 36 drive gear of gear train 22
20 38 top of colander 18
21 39 top of pot 16
22 40 ring gear of driven gear 34 of gear train 20
23 41 through bore through pot 16 of gear train 22
24 42 front portion of handle 24
25 44 rear portion of handle 24
26 46 switch on rear portion 44 of handle 24
27 48 battery interface contained in rear portion 44 of handle 24 for
28 electrically communicating with at least one battery 50 for
29 powering motor 20
30 50 at least one battery for powering motor 20
31 52 two pair of key through bores through pot 16 of apparatus 16

- 1 54 upper portion of each key through bore of two pair of key through
- 2 bores 52 through pot 16 of apparatus 26
- 3 56 lower portion of each key through bore of two pair of key through
- 4 bores 52 through pot 16 of apparatus 26
- 5 58 inner surface of pot 16
- 6 60 four blind bores in inner surface 58 of pot 16 of apparatus 26 of
- 7 apparatus 26
- 8 62 upper extreme of upper portion 54 of each key through bore of two
- 9 pair of key through bores 52 through pot 16 of apparatus 26
- 10 63 two pair of studs of apparatus 26
- 11 64 heads of two pair of studs 63 of apparatus 26

1 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

2 Referring now to the figures, in which like numerals indicate like
3 parts, and particularly to FIGURES 1 and 2, the vessel of the present
4 invention is shown generally at 10 for separating and collecting excess
5 oil 12 from deep fried foods 14 disposed therein before the deep fried
6 foods 14 are sauted.

7 The vessel 10 includes a pot 16, a colander 18, a motor 20, and a
8 gear train 22.

9 The colander 18 is rotatably mounted in the pot 16, and is for
10 holding the fried foods 14.

11 The motor 20 is operatively connected to the colander 18, and
12 rotates the colander 18 relative to the pot 16 for centrifugally forcing
13 the excess oil 12 from the deep fried foods 14 out therefrom and
14 collecting in the pot 16.

15 The gear train 22 operatively connects the motor 20 to the colander
16 18.

17 The vessel 10 further comprises a handle 24. The handle 24 is
18 replaceably attached to the pot 16.

19 The vessel 10 further comprises an apparatus 26. The apparatus 26
20 replaceably attaches the handle 24 to the pot 16.

21 The pot 16 has a bottom 28 and a bearing 30. The bearing 30 of the
22 pot 16 extends centrally upwardly from the bottom 28 of the pot 16.

23 The colander 18 has a bottom 32. The bearing 30 of the pot 16
24 extends centrally to the bottom 32 of the colander 18 so as to form an
25 axis of rotation 33 about which the colander 18 rotates in the pot 16.

26 The gear drive 22 comprises a driven gear 34 and a drive gear 36.

27 The colander 18 has a top 38, the pot 16 further has a top 39, and
28 the gear train 22 further has the pot 16 having a through bore 41. The
29 through bore 41 in the pot 16 extends through the pot 16, just below the
30 top 39 of the pot 16. The driven gear 34 of the gear drive 20 is a ring

1 gear 40 that extends horizontally and circumferentially around the
2 colander 18, just below the top 38 of the colander 18.

3 The handle 24 is hollow, and has a front portion 42 and a rear
4 portion 44. The front portion 42 of the handle 24 extends bulbously and
5 communicatingly from the rear portion 44 of the handle 24, and is
6 replaceably attached to the pot 16.

7 The rear portion 44 of the handle 24 has a switch 46 mounted
8 thereon, and contains a battery interface 48. The battery interface 48
9 in the rear portion 44 of the handle 24 electrically communicates with the
10 motor 20 through the switch 46, and is for electrically communicating with
11 at least one battery 52 for powering the motor 20.

12 The motor 20 extends vertically in the front portion 42 of the
13 handle 24, and has the drive gear 36 of the gear train 22 horizontally
14 thereon.

15 The drive gear 36 of the gear train 22 passes through the through
16 bore 41 in the pot 16, and engages the driven gear 34 of the gear train
17 22 so as to allow the motor 20 to rotate the colander 18 in the pot 16
18 when the switch 46 is activated.

19 The configuration of the apparatus 26 can best be seen in FIGURES
20 1, 3, and 4, and as such, will be discussed in reference thereto.

21 The apparatus 26 comprises the pot 16 having two pair of key through
22 bores 52. The two pair of key through bores 52 through the pot 16
23 straddle the through bore 41 through the pot 16.

24 Each key through bore of the two pair of key through bores 52
25 through the pot 16 has an upper portion 54 and a lower portion 56.

26 The upper portion 54 of each key through bore of the two pair of key
27 through bores 52 through the pot 16 is vertically elongated.

28 The lower portion 56 of each key through bore of the two pair of key
29 through bores 52 through the pot 16 is circular and wider than the upper
30 portion 54 of an associated key through bore of the two pair of key
31 through bores 52 through the pot 16.

1 The pot 16 further has an inner surface 58, and the apparatus 26
2 further comprises the inner surface 58 of the pot 16 having four blind
3 bores 60. Each blind bore of the four blind bores 60 in the inner surface
4 58 of the pot 16 is disposed concentrically with an upper extreme 62 of,
5 and is wider than, the upper portion 54 of an associated key through bore
6 of the two pair of key through bores 52 through the pot 16.

7 Each blind bore of the four blind bores 60 in the inner surface 58
8 of the pot 16 is circular, and has a width equal to that of the lower
9 portion 56 of an associated key through bore of the two pair of key
10 through bores 52 through the pot 16.

11 The apparatus 26 further comprises two pair of studs 63 with heads
12 64. The two pair of studs 63 of the apparatus 26 extend outwardly from
13 the front portion 42 of the handle 24, terminate in the heads 64 thereof,
14 straddle the drive gear 36 of the gear drive 22, and align with the two
15 pair of key through bores 52 through the pot 16, respectively.

16 The heads 64 of the two pair of studs 63 of the apparatus 26 are
17 larger than the upper portion 54 of the two pair of key through bores 52
18 through the pot 16, respectively, but smaller than the lower portion 56
19 of the two pair of key through bores 52 through the pot 16, respectively,
20 so as to allow the heads 64 of the two pair of studs 63 of the apparatus
21 26 to pass through the lower portion 56 of the two pair of key through
22 bores 52 through the pot 16, respectively, be lifted upwardly behind the
23 upper portion 54 of the two pair of key through bores 52 through the pot
24 16, respectively, and be captured in the four blind bores 60 in the inner
25 surface 58 of the pot 16, respectively, by virtue of the weight of the
26 handle 24 tipping the heads 64 of the two pair of studs 63 of the
27 apparatus 26 into the four blind bores 60 in the inner surface 58 of the
28 pot 16, respectively, so as to prevent the heads 64 of the two pair of
29 studs 63 of the apparatus 26 from dropping back down the two pair of key
30 through bores 52 through the pot 16 and detaching the handle 24 from the
31 pot 16.

1 It will be understood that each of the elements described above, or
2 two or more together, may also find a useful application in other types
3 of constructions differing from the types described above.

4 While the invention has been illustrated and described as embodied
5 in a vessel for separating and collecting excess oil from deep fried foods
6 disposed therein before the deep fried foods are sauted, however, it is
7 not limited to the details shown, since it will be understood that various
8 omissions, modifications, substitutions and changes in the forms and
9 details of the device illustrated and its operation can be made by those
10 skilled in the art without departing in any way from the spirit of the
11 present invention.

12 Without further analysis, the foregoing will so fully reveal the
13 gist of the present invention that others can, by applying current
14 knowledge, readily adapt it for various applications without omitting
15 features that, from the standpoint of prior art, fairly constitute
16 characteristics of the generic or specific aspects of this invention.